Public Notice

Public Notice Number: 199850472
Date: September 12, 2002
Comments Due: October 12, 2002

US Army Corps of Engineers

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

In reply, please refer to the Public Notice Number

TO WHOM IT MAY CONCERN:

SUBJECT: An application for a Department of the Army permit under authority of Section 404 of the Clean Water Act and water quality certification under Section 401 to fill 7.9 acres of wetlands for the Redwood Villages mixed use residential/commercial project.

APPLICANT: Nathan Pugsley, Danville Land Investments, L.L.C.
39 East Eagleridge Drive, Suite 100
North Salt Lake, Utah 84054
(801) 299-6700

LOCATION: The proposed Redwood Villages is a 270-acre project situated between Redwood Road on the east and the future Legacy Highway on the west. The site is located within the limits of the City of North Salt Lake (the "City"), within a portion of Section 3, Township 1 North, Range 1 West in Davis County, Utah UTM 4522225N, 420625E (see Figures 1 and 2).

PURPOSE: The purpose of the project is to develop a mixed use residential and commercial community. The project will include multiple housing options, open space, and lots for commercial development. The commercial space will generate a tax base for the City to help offset the costs of providing and maintaining essential municipal services for the community. The development will be characterized by open space along a central wetland corridor, commercial lots close to Redwood Road and walking trails connect to the Legacy Highway in several locations.

PROJECT DESCRIPTION: This project is proposed as a planned mixed-use community, consisting of various types of dwelling units (single family lots: 4,000 sf to 8,000 sf; 3-plex "Big Homes", townhomes, apartments), an elementary school site, a church site, park(s), open space, and commercial retail and office space. Development will include all utilities, roadways, secondary water, and open space amenities. It is currently zoned Commercial General by the City. The intent is to re-zone the area for a Planned Residential Community.

In 1999 a permit application (Public Notice No. 199850472) on this property was submitted for a commercial/industrial development known as Legacy Business Park. It proposed to fill all of the wetlands on the site and to mitigate for those impacts off-site. That application was later withdrawn and no action was taken.

WETLAND DESCRIPTION: The majority of the delineated 23.3 acres of wetlands (Figure 3) present on the site are depressional wet meadows. Their hydrology is not driven by ground water, but by surface run-off from direct precipitation that collects in specific low spots. In some areas, the wetlands have a hard-pan layer just under the surface that precludes ground water from reaching the surface. The depth to water table (taken from SCS soil survey, July 1968, and confirmed in 1997 and 2002 during site monitoring) is 30 to 48 inches.

These wetlands are in a late vegetational succession stage typical of wetlands associated with Great Salt Lake. The primary factor in resetting this succession is fluctuating water levels of the lake. The virtually flat (0.5%) project site ranges in elevation from 4216' to 4226' MSL. Because of their elevation compared to the lake, they have not been inundated by saline waters in a very long time and have subsequently become less saline. As they have "freshened" due to seasonal flushing by precipitation, the vegetation has changed from more salt tolerant species to less salt tolerant species as follows: Seepweed (*Suaeda* spp.), to Iodine Bush (*Allenrolfea occidentalis)*, to Little Barley *(Hordeum pussilum)* to Saltgrass (*Distichlis spicata*). Currently, the primary vegetation is saltgrass, and the land is grazed.

The functions observed by the applicant include surface water storage and some habitat for small rodents and birds, and some food chain support. At times when Great Salt Lake reaches maximum capacity and all other surrounding wetlands are inundated, these wetlands would be among the fewer remaining and therefore may have some greater importance. Such times are extremely rare, and will be made even more unlikely with the construction of the Legacy Highway. Saltwater inundation of these wetlands can not occur unless Great Salt Lake significantly exceeds high water levels.

There is currently a large drainage channel which bisects the property. The base flow of the drainage channel is approximately 1 cfs, with peak flows reaching approximately 65 cfs (controlled by the size of the culvert entering the project site). The water originates off-site to the east, bringing runoff from other parts of North Salt Lake. It then enters this property via a pipe on the east boundary near 600 North at Redwood Road. The channel proceeds west to join with a larger channel, and eventually flows to the Jordan River. With the construction of the proposed Legacy Highway, the existing open channel to the Jordan River will be eliminated. To provide drainage for this site, two (2) 48" diameter culverts will be installed under the Legacy Highway and will continue directly west to the Jordan River. All runoff from the proposed development, as well as the runoff carried by the existing channel will utilize these proposed culverts.

APPLICANTS CONSIDERATION OF ALTERNATIVE SITES: Since fall of 2001 when the applicant considered purchasing the property, they searched for similar sites in North Salt

Lake, Centerville, Bountiful, West Bountiful and Woods Cross in areas that appeal to entry level buyers. The minimum project size was 50 acres. Search categories included available Residential, Commercial, Industrial, Recreational, Agricultural, Multi Housing, and Other. The applicant stated these searches found no willing sellers. No sites of this size in the area were available for sale. A detailed summary of the Applicant's off-site alternatives evaluation is available from the applicant.

PROJECT IMPACTS AND MITIGATION: Under the applicants preferred project alternative, approximately 7.9 acres of wetlands will be directly impacted by this project. The applicant's rationale for wetland impacts is attached (Attachment 1). To compensate for impacts, the applicant proposes creation of 15.6 acres of wetlands within the property boundaries. (See Figure 4.) (Note: Other fill mitigation alternatives are under consideration and described as Alternative 1 and Alternative 2.)

A summary of development impacts to the wetlands includes:
- Loss of wetlands due to direct impacts (filling).
- Limited surface runoff into the wetlands from developed areas.
- Limited buffer space around some of the wetlands.
- The potential for pesticides and fertilizers to make their way into some of the wetlands from adjacent residential land uses is high in areas where no berm is proposed.

Wetland areas will be used as open space, recreation (trails), and water quality amenities. These wetlands are concentrated into three main locations, namely the central wetland corridor (CWC), the northwest wetland corridor (NWC), and the southwest mitigation lot (SML). The uplands within the CWC, the NWC, and the SML will be re-graded and converted to a wetland/upland mosaic, providing numerous additional shallow depressions for collection of precipitation and surface runoff. The land will be re-vegetated with native plant materials corresponding to what is currently found.

Central Wetland Corridor (the "CWC") - The CWC runs roughly from Redwood Road to the proposed Legacy Highway. An existing storm drainage ditch, containing water from upstream drains and springs, runs adjacent to the CWC. Under the proposed development plan, the off-site flows will be rerouted through the length of the CWC via a small channel. The small channel will be sized approximately 2' wide by 1' deep with 2:1 side slopes to contain the perpetual base flow (1 to 2 cfs). During storm events (65 cfs calculated for the 100-year event) it would exceed its banks and flood the entire CWC. Because of the minimal slopes on this property, the water in the small channel will move slowly, allowing for an increased opportunity for vegetation to help remove sediment and some pollutants from the water. This will enhance water quality and help protect downstream waters (Jordan River and Great Salt Lake). Earth berms would be constructed along the boundaries of this wetland to define the floodplain of the CWC and provide a barrier between the wetlands and homes. The berm is proposed to be 3 feet high, have a 6 foot flat top for pedestrian trails with 4:1 side slopes (appropriately re-seeded with compatible vegetation), resulting in a base width of approximately 30 feet. Footbridge crossings may be introduced at appropriate locations to

minimize impacts at crossings and to provide trail connectivity within the development. Trails are anticipated to link the community, and to provide links to the proposed trail system along the Legacy Highway. At locations where road crossings are required, box culverts and/or bridges will be utilized to maintain a continuous corridor so that smaller wildlife could still move along its entire length.

While the CWC has wetland branches that extend towards Redwood Road, these branches or "fingers" will be filled. The area along Redwood Road where these fingers are located is considered prime commercial property and, if developed, will provide some tax base (and thus a source of revenue) for the City that will offset the costs of providing services for the residential portion of the development. (A more thorough review of this issue can be found in a report prepared by the Brereton Group for the Applicant, entitled "Fiscal Impact of Redwood Village for the City of North Salt Lake," available upon request.)

The applicant proposes to re-grade 7.13 acres of uplands within the CWC to create a wetland/upland mosaic, providing numerous additional shallow depressions for collection of precipitation and surface runoff. The land will be re-vegetated with native plant materials corresponding to what is currently found.

Northwest Wetland Corridor (the "NWC") - The NWC is a small (approximately 3 acre) wetland complex in the northwest corner of the project. With the project as proposed, the area would rely primarily on direct precipitation for its hydrology, much as it does now. Excess storm run-off could be introduced by the use of bubble-up boxes. These devices allow nuisance water--runoff from minor storm events and the initial run-off during a large storm event (which contain more highly concentrated pollutants)--to bypass the wetlands. During large events, the run-off (which generally tends to be more diluted and contain fewer pollutants) will exceed pipe capacities and back up and enter the wetlands via the bubble-up boxes. This simulates the natural process by which storm water currently enters the NWC. In addition, some runoff from the adjacent school and park parcels could drain into to the NWC. NWC will not be provided with permanent water sources nor perimeter berming or buffering, but may have "bubble-up" boxes installed.

As with the CWC, the uplands within the NWC will be re-graded and converted to a wetland/upland mosaic and be re-vegetated with native plant materials corresponding to what is currently found. 2.1 acres of wetland/upland mosaic will be created.

Southwest Mitigation Lot (the "SML") - The SML is approximately 7.86 acres in size consisting of 6.36 acres of uplands and 1.5 acres of jurisdictional wetlands. The SML has been reserved in the lowest portion of the property to provide a mitigation area around some existing isolated wetlands.

Within the SML, any existing man-made obstructions to runoff (buildings and roads) would be removed and the 6.36 acres of uplands will be re-graded to create a wetland/upland mosaic. SML will be re-vegetated with native plants corresponding to what is currently on-

site. SML will not be provided with permanent water sources nor perimeter berming or buffering, but may have "bubble-up" boxes installed.

Storm Drainage
Under the proposed development plan, these off-site flows will be directed through the CWC via a small channel. The small channel will be sized to contain the base (nuisance) flows and initial storm event flows and conduct them directly to the future anticipated 48" culverts proposed at Legacy Highway and through the Legacy Nature Preserve. Vegetation will establish in the channel and provide some sediment and pollutant removal. During large runoff events, the water will overflow the channel and spread across more of the CWC, thereby utilizing the excess water to hydrate the wetlands. Earth berms will be used to define the flood plain and protect adjacent residences and yards. The berm will also provide some buffering to the CWC in that it separates the boundaries of the wetlands and the residential development, and also helps keep chemicals, fertilizers, and pesticides often used in residential yards from entering directly into the wetlands.

The development of this project will generate its own storm runoff, particularly from the commercial areas which will be largely impervious surfaces. With on-site detention, the estimated discharge rate will be 65 cfs. The bulk of the storm water will be collected in the streets and piped to a large drainage/detention swale to be constructed along the west boundary of the project. Storm water from the project entering the constructed drainage/detention swale will flow slowly towards the culverts due to vegetation and the minimal slopes (0.08%) in the swale. The low velocity will allow for some sediment and pollutant removal from the water before it enters the culverts. It is anticipated that this water will be relatively clean as it enters the 48" culverts. From there it will join the off-site drainage water going under the Legacy Highway and on to the Jordan River. These (2) 48" culverts will have a combined capacity of 130 cfs from the highway to the Jordan River.

Elements of the mitigation for the applicants preferred project alternative include:
- Retain all mitigation on-site and in-kind.
- Enhancing water quality of storm water flowing through the CWC.
- Maintain wetlands that will still be accessible should all the surrounding wetlands be inundated by the rising water of Great Salt Lake during extremely high lake cycles.
- Moderate buffering for the CWC.

Summary:

Total Wetlands	23.3 acres
Directly Impacted Wetlands	7.9 acres
Wetlands Preserved	15.4 acres
Proposed On-Site Mitigation Area	15.6 acres

Alternative One: 9.4 ac Impact, Elimination of the SML, Off-Site Mitigation at a Wetlands Mitigation Bank. Because of the potential adverse impacts to both the development and the existing wetlands, some off-site mitigation may be worth considering. The CWC is important

to the overall development concept of the project, and it would be retained and mitigated as proposed in the on-site, in-kind option described above. Due to the acreage of the wetlands complex in the NWC, the wetlands would be retained and uplands would be converted to wetlands to create mitigation as proposed in the on-site, in-kind option. Within both of these designated areas, additional wetlands would be developed to the fullest extent possible utilizing the uplands as proposed in the applicant's preferred project alternative. The SML would be eliminated as a mitigation area, and the wetlands contained in that area (approximately 1.5 acres) would be filled The total area of the SML would be added to the developable property of the project. It would be eliminated for several reasons:

- There are relatively few existing wetlands present there.
- There will already be some impacts due to necessary road construction.
- Providing additional water to the SML is difficult due to its location.
- The existing wetlands are isolated and not part of a corridor or larger wetland group.
- The development of this property would provide sufficient return to purchase mitigation credits from an agreed upon mitigation bank.

Advantages to the environment for Alternative One include:

- Reduces amount of created wetlands, along with risks and monitoring associated with created wetlands.
- Guarantees success of off-site mitigation, insuring that functional values of the wetlands will not be lost or compromised.
- Improves water quality of off-site generated storm water as it flows through the CWC.

Summary:

Total Wetlands . . . . . 23.3 acres
Directly Impacted Wetlands . . . . . 9.4 acres
Wetlands Preserved . . . . . 13.9 acres
Proposed On-Site Mitigation Area . . . . . 9.2 acres

Applicant proposes additional off-site mitigation through purchase of credits from a wetlands mitigation bank.

Alternative Two: 12.9 ac Impact, Elimination of the SML and NWC, Off-Site Mitigation at a Wetlands Mitigation Bank. Alternative Two calls for the filling and development of the wetlands in the NWC and the SML. The CWC would be preserved but no new wetlands would be created on the uplands contained therein. The justification for Alternative Two is that while significant existing wetlands can be preserved and enhanced in the CWC, the NWC and the SML may remain stressed. There are no buffers available for either habitat diversity or separation from development. Virtually all surface runoff is cut off and re-routed off-site via the storm drain system. The NWC is completely separated from any adjacent wetlands and, although somewhat large in size, is isolated. Except for direct precipitation and storm water that may be introduced in "bubble-up" boxes, it has no consistent source of hydrology. It may easily pick up pollutants from the neighboring school yard and residential area (fertilizers and pesticides). The SML currently contains few, isolated wetlands within the proposed mitigation area. It will be impacted by necessary road construction and will be

difficult to supply with any water sources other than direct precipitation. Based on these reasons, it may be more prudent to fill the SML and mitigate off-site. The money spent in preserving the marginal wetlands in the NWC and SML might be better spent in purchasing viable mitigation credits elsewhere. Advantages of this option include:

- Elimination of marginal wetlands.
- Free up of additional property which, when developed, will generate a return sufficient to purchase compensating wetlands mitigation credit.
- Leaving the current uplands within the CWC as uplands to provide some diversity and habitat.
- Improvement in water quality for the off-site generated storm water as it passes through the CWC.

Summary:

Total Wetlands . . . . . 23.3 acres
Directly Impacted Wetlands . . . . . 12.9 acres
Wetlands Preserved . . . . . 10.4 acres
Proposed On-Site Mitigation Area . . . . . 0.0 acres

Applicant proposes additional off-site mitigation through purchase of credits from a wetlands mitigation bank.

Cumulative Impacts. There are other wetlands located just west of the proposed Redwood Village project. Those adjacent to the project were impacted by the preliminary grading for the Legacy Highway. Those further west have been purchased by UDOT and included in its Legacy Nature Preserve. The Highway effectively cuts off the wetlands on Redwood Villages property from those located further west, and seriously limits their ability to function as an integral part of that wetland system.

Cultural Resources: This project will adversely affect known historic properties. Coordination with Utah State Historic Preservation Officer (USHPO) has been initiated and a mitigation plan for the impacts has been submitted to USHPO for review.

Threatened and Endangered Species: This activity would not affect any threatened or endangered species or their critical habitat.

Water Quality Certification: Certification that the proposed work, if permitted, will not violate applicable water quality standards have been requested from the Utah Division of Water Quality. The Utah Division of Water Quality intends to issue certification, provided that the proposed work will not violate applicable water quality standards. Projects are usually certified where the project may create diffuse sources (nonpoint sources) of wastes which will occur only during the actual construction activity and where best management practices will be employed to minimize pollution effects. Written comments on water quality certification should be submitted to Mr. William O. Moellmer, Utah Division of Water Quality, 288 North 1460 West, PO Box 144870, Salt Lake City, Utah 84114-4870, on or

before **October 12, 2002.**

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties. All interested parties are invited to submit written comments on or before **October 12, 2002.** Personal information in comment letters is subject to release to the public through the Freedom of Information Act. Any person may request, in writing, within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. The permit decision will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership, and in general, the needs and welfare of the people. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. If additional information is required, please contact Mr. Nathan Pugsley of Danville Investments at 801-299-6700, or Ms. Anna Langdon the Utah Regulatory Office, telephone 801-295-8380, ext. 15, or email *Anna.M.Langdon@usace.army.mil.* Written comments should reference Public Notice Number 200250179 and should be mailed to the District Engineer-Sacramento, U.S. Army Corps of Engineers, ATTN: Ms. Anna Langdon, Utah Regulatory Office, 533 West 2600 South, Suite 150, Bountiful, Utah 84010.

Michael J. Conrad, Jr.
Colonel, Corps of Engineers
District Engineer

Enclosures: Attachment 1 (2 pages); Figures 1-4

ATTACHMENT 1
APPLICANT'S RATIONALE FOR WETLAND IMPACTS

Roads and Entrance Locations

The roads for this project have been located between the major wetland corridors so as to avoid as much as possible impacts to the existing wetlands. They have been set back from these corridors at distances that will accommodate the proposed building lots and internal local streets. Where crossing a wetland corridor, they do so at a point where either no existing wetlands are present or at its narrowest point where impacts are minimized. The loss of some isolated wetlands is unavoidable. More detailed explanations of each road segment and the reasons for its location are as follows:

Main Boulevard (westerly extension of 600 North) - Redwood Road is a state road and UDOT has required that the main entrance point from Redwood Road be lined up with the existing 600 North to accommodate future signalization at that intersection. This road running west from the 600 North/Redwood Road intersection would be the main access road to Redwood Villages (the "Main Boulevard"). Other entrances may be allowed along Redwood Road, but they will be limited to driveways for commercial parcels. The Main Boulevard begins to curve away from the CWC after 100 feet, but cannot be reasonably curved to completely avoid some wetland impacts. The impacts are limited to the outlying fingers and do not infringe on the main wetland spine of the CWC.

Cutler Drive Extension (first north/south frontage road) - This road is located approximately 528 feet back from Redwood Road. It is located here for three reasons: 1) this lines up with the stub for Cutler Drive which is located just to the south of the property and will extend along the entire Redwood frontage as required by the City (the "Cutler Drive Extension"), 2) because of the jog in the front property line the road could not be located any closer to Redwood Road (attempting to avoid wetland impacts) and still remain within the project boundaries, and 3) a lot depth of 500 feet (as measured back from Redwood Road) is considered a minimum acceptable distance for commercial lot development.

Roundabouts - The use of roundabouts serve several important functions: 1) they allow an intersection with roads at non-right angles, 2) they have been proven to be much safer than traditional stop-controlled intersections, 3) they disperse traffic throughout the development in an orderly and efficient manner, 4) they have a calming effect on traffic speeds which increases safety, and 5) and they also serve as an accent point in what might be considered village centers for the community. The first roundabout (the "East Roundabout") has been located at the intersection of the Main Boulevard and Cutler Drive Extension. Its use here allows for the curving of the Main Boulevard to avoid impacting the CWC and still provide an intersection with the Cutler Drive Extension. A second roundabout (the "West Roundabout") is located along the Main Boulevard near the middle of the property. Its use provides a safe intersection of non-perpendicular roads, allowing a second north/south road (the "North/South Road") to be angled to minimize its impact in crossing the CWC.

Main Boulevard (from intersection with Redwood Road at 600 North to South West Access) - The Main Boulevard curves away from the CWC as quickly as is reasonably possible in order to allow development on either side of the road. It passes roughly midway between the CWC and NWC, which causes it to impact an isolated wetland finger at a point near the West Roundabout. It then curves to the south and crosses the CWC where there are no existing wetlands present, but also at a point where the CWC is relatively narrow to allow for the installation of a box culvert which will provide a viable connection or continuance of the CWC to the west. As the Main Boulevard proceeds south, it necessarily curves back to the west to make a required connection to an existing road stub at 1100 West (the "Southwest Access"), the fixed southwest access point to the project. Although the layout attempts to avoid the existing wetland in this area, some edges are unavoidably impacted.

ATTACHMENT 1 cont'd
APPLICANT'S RATIONALE FOR WETLANDS IMPACTS

North/South Road - Beginning at the north boundary of the property, this road runs south and crosses the NWC at a narrow location. The North/South Road is not located further to the east to avoid this little "tip" or finger of the NWC because doing so limits the width of the parcel to the north of the NWC such that only one subdivision entrance road can be located. Two subdivision ingress/egress access roads are required by the City in order to develop the portion the property located between the NWC and the north property boundary. The North/South Road was located as shown to provide room for the required two access roads (and adjacent lots) running to the west. The North/South Road proceeds to the south and enters the West Roundabout, then angles south and east to minimize its impacts in crossing the CWC, as well as providing access for the larger single family residential lots. It then swings back to the west to tie into the Main Boulevard. A long linear isolated wetland is impacted and is proposed to be filled. This particular wetland area is the result of digging borrow material a number of years ago to create an adjacent dirt roadway. Under natural conditions no wetland would have developed in this location. This North/South Road is necessary to provide adequate circulation to specific areas of the project, reduce traffic loads on the Main Boulevard, increase overall safety by dispersing the traffic throughout the various neighborhoods, and improve emergency vehicle access.

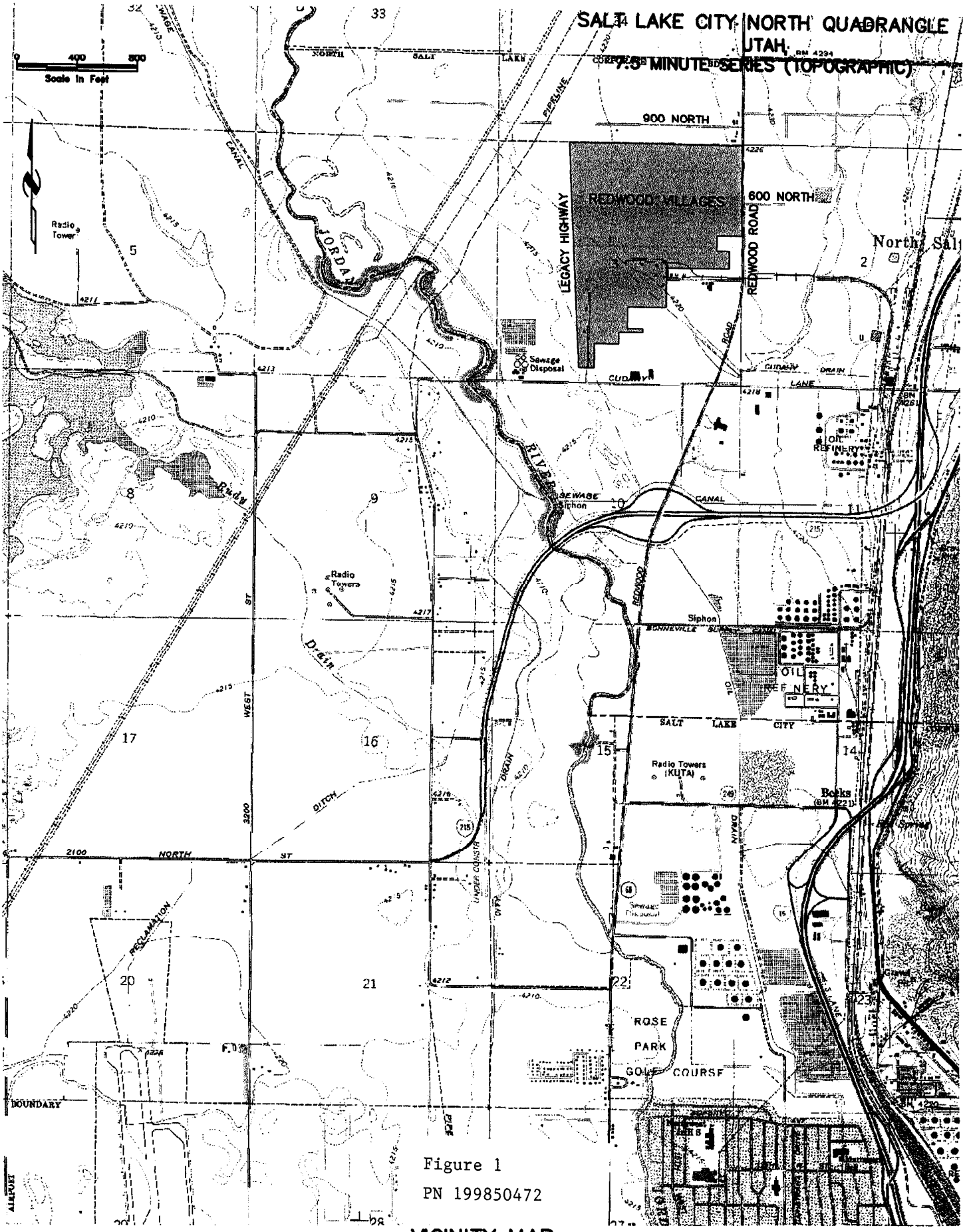
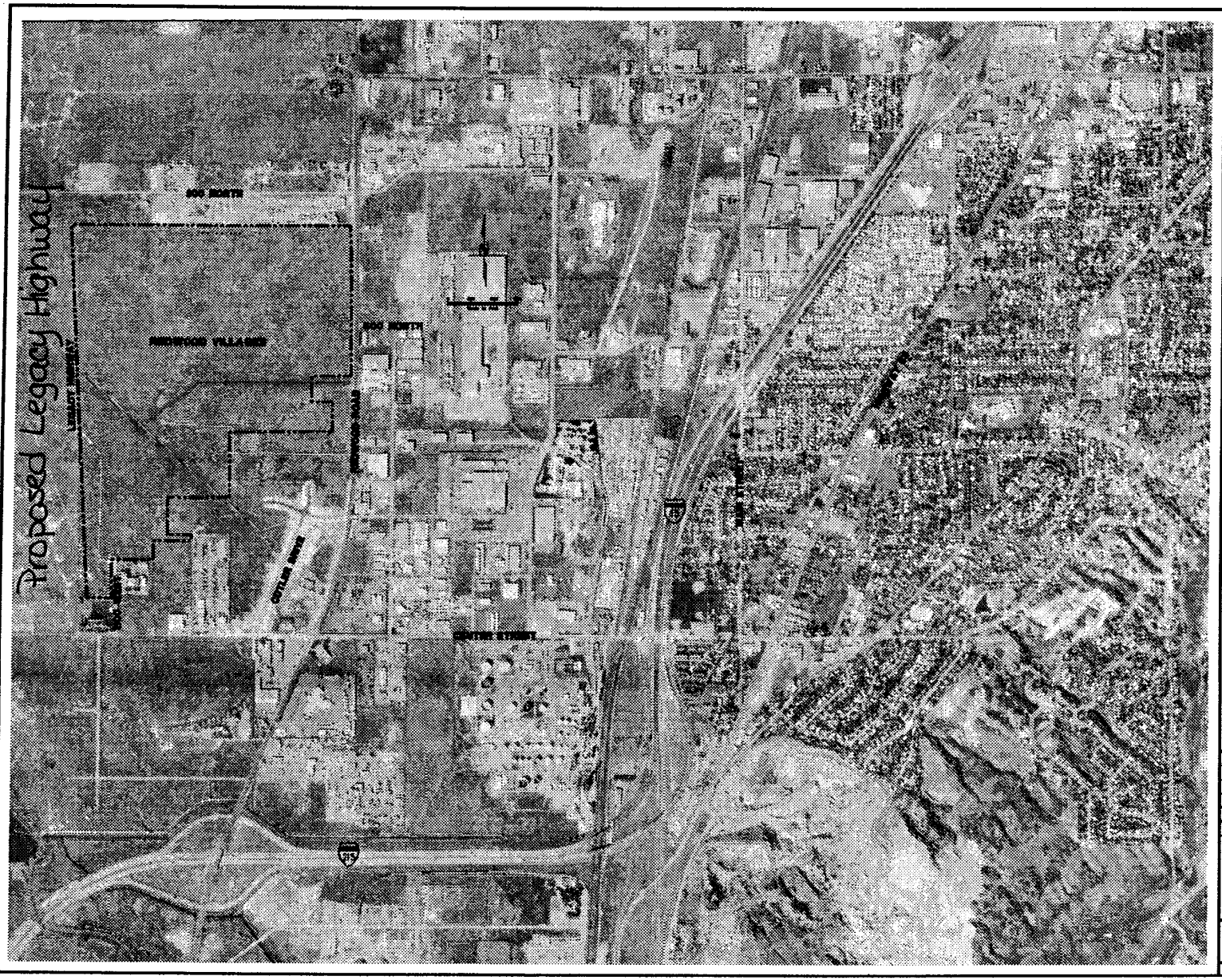


Figure 1

PN 199850472

VICINITY MAP



NOTES.

Figure 2

PN 199850472

Rev.	By	Date	Remarks

DANVILLE LAND INVESTMENT L.L.C.

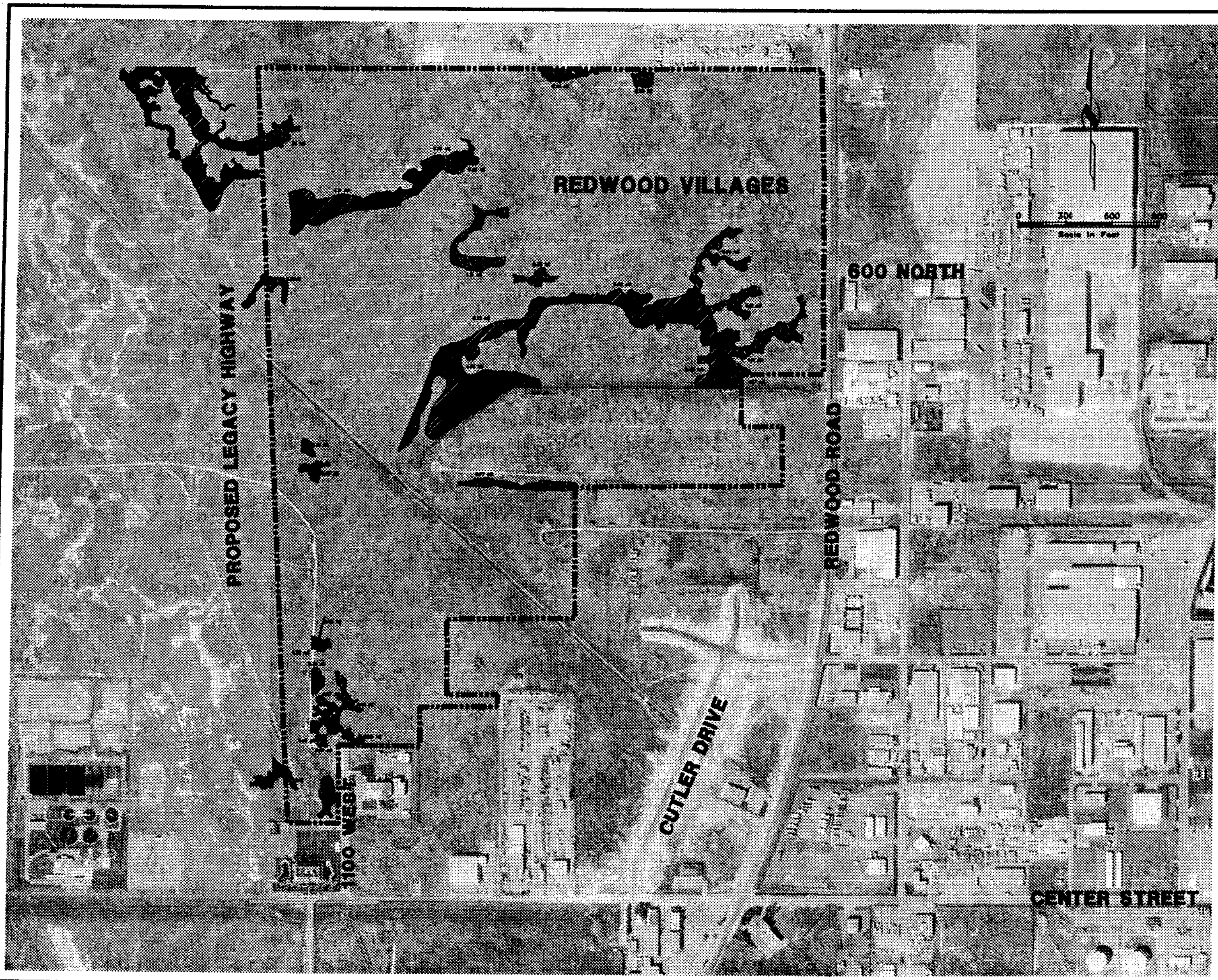
REDWOOD VILLAGES

LOCATION MAP

BINGHAM ENGINEERING
SALT LAKE CITY • (801) 566-5599

Design JBL
Drawn AKB
Checked JBL
Reviewed JBL

Date AUGUST 2002 | Proj. # 4053 | Sht. FIGURE 2



NOTES:

Figure 3
PN 199850472

DANVILLE LAND INVESTMENT L.L.C.
REDWOOD VILLAGES
WETLAND DELINEATION

BINGHAM ENGINEERING
SALT LAKE CITY

Date AUGUST 2002 Proj # 4063